

1600

RAW SEQUENCE LISTING DATE: 09/15/2003 PATENT APPLICATION: US/09/964,858A TIME: 15:33:45

Input Set : A:\sequencelisting_09-964,858.txt
Output Set: N:\CRF4\09152003\1964858A.raw

```
3 <110> APPLICANT: HOSTETTER, Margaret K.
        DEVORE-CARTER, Denise
 6 <120> TITLE OF INVENTION: ANTIBODIES TO THE PROPEPTIDE OF CANDIDA ALBICANS
 8 <130> FILE REFERENCE: P07274US02/BAS
10 <140> CURRENT APPLICATION NUMBER: US 09/964,858A
11 <141> CURRENT FILING DATE: 2001-09-28
13 <150> PRIOR APPLICATION NUMBER: US 60/237,082
14 <151> PRIOR FILING DATE: 2000-09-28
16 <160> NUMBER OF SEQ ID NOS: 8
18 <170> SOFTWARE: PatentIn version 3.1
                                                        ENTERED
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 1664
22 <212> TYPE: PRT
23 <213> ORGANISM: Candida albicans
25 <400> SEQUENCE: 1
27 Met Asn Ser Thr Pro Ser Lys Leu Pro Ile Asp Lys His Ser His
31 Leu Gln Leu Gln Pro Gln Ser Ser Ser Ala Ser Ile Phe Asn Ser Pro
      20
                                 25
35 Thr Lys Pro Leu Asn Phe Pro Arg Thr Asn Ser Lys Pro Ser Leu Asp
39 Pro Asn Ser Ser Ser Asp Thr Tyr Thr Ser Glu Gln Asp Gln Glu Lys
                         55
43 Gly Lys Glu Glu Lys Lys Asp Thr Ala Phe Gln Thr Ser Phe Asp Arg
                      70
                                         75
47 Asn Phe Asp Leu Asp Asn Ser Ile Asp Ile Gln Gln Thr Ile Gln His
                 85
                                     90
51 Gln Gln Gln Gln Gln Gln Gln Gln Leu Ser Gln Thr Asp Asn
                                 105
              100
55 Asn Leu Ile Asp Glu Phe Ser Phe Gln Thr Pro Met Thr Ser Thr Leu
56 115
                            120
59 Asp Leu Thr Lys Gln Asn Pro Thr Val Asp Lys Val Asn Glu Asn His
                          135
63 Ala Pro Thr Tyr Ile Asn Thr Ser Pro Asn Lys Ser Ile Met Lys Lys
                      1.50
                                         155
67 Ala Thr Pro Lys Ala Ser Pro Lys Lys Val Ala Phe Thr Val Thr Asn
                  165
                                     170
71 Pro Glu Ile His His Tyr Pro Asp Asn Arg Val Glu Glu Glu Asp Gln
              180
                                 185
75 Ser Gln Gln Lys Glu Asp Ser Val Glu Pro Pro Leu Ile Gln His Gln
                             200
                                                 205
79 Trp Lys Asp Pro Ser Gln Phe Asn Tyr Ser Asp Glu Asp Thr Asn Ala
```



Input Set : A:\sequencelisting_09-964,858.txt
Output Set: N:\CRF4\09152003\I964858A.raw

83 84		Val	Pro	Pro	Thr	Pro 230	Pro	Leu	His	Thr	Thr 235	Lys	Pro		Phe	Ala 240
-		Leu	Leu	Asn	Lys 245		Asn	Glu	Val	Asn 250		Glu			Ala 255	
91 92	Thr	Asp	Met	Lys 260	Leu	Lys	Arg	Glu	Asn 265	Phe	Ser	Asn	Leu	Ser 270	Leu	Asp
95 96	Glu	Lys	Val 275	Asn	Leu	Tyr	Leu	Ser 280	Pro	Thr	Asn	Asn	Asn 285	Asn	Ser	Lys
99 100		Val 290		Asp	Met	Asp	Ser 295		Leu	Gln	Asn	Leu 300		Asp	Ala	Ser
	Lys 305		Lys	Thr	Asn	Glu 310		ıle	His	s Asr	Let 315		Phe	Ala	Leu	Lys 320
	Ala	Pro	Lys	. Asr	Asp 325		Glu	ı Asr	n Pro	Leu 330		Ser	Leu	ı Thr		Ala
108 111	Asp	Ile	Ser	Leu			Ser	Gly	/ Sei	Ser	Glr	Ser	Ser	Let	335 Gln	Ser
112		_	_	340		_		_	345			_	~ 1	350		_
115 116		Arg	Asr 355	-) Asn	Arg	Val	. Leu 360		ı Ser	· Val	. Pro	365 365		Pro	Lys
119 120	_	Val 370		Pro	Gly	Leu	Ser 375		a Asr	n Asp	Gly	7 Il∈ 380		Gly	Phe	Ser
123		Glu		. Val	. Glu	Ser 390	Let		Pro	Arg	Asp 395	Leu		Arg	Asp	Lys
			Thr	Thr	Lys			Asp	Ala	a Pro			Asn	Asn	Glu	400 Asn
128					405					410)				415	
132			_	420)				425	5	-			430		Val
135 136		Ser	Asp 435) His	Leu	Asp	Ser 440		e Asp	Arg	s Ser	Tyr 445		His	Thr
139 140	Glu	Gln 450		Ile	Leu	Asn	Lev 455		ı Asr	ser	Ala	Ser 460		Ser	Gln	Ile
	Ser 465		Asn	Ala	Leu	Glu 470		Gln	Arg	g Gln	Thr 475			Gln	Glu	Gln 480
			Ala	Ala		Pro		Glu	Glu		Ser		Ser	Asp		Ile
148	T	77 7	T	C1	485		T		. 7	490		Dha		T	495	
151	ьys	vaı	. гуѕ	500		Pro	гуу	s ser	505		GIU	Pne	· vai	. Бус 510		Thr
	Ile	Lys	_		Pro	Val	Ser			Glu	Il∈	Lys			Lys	Arg
156		Ξ.	515		_		_	520		_	_	0.1	525			
										э гуз					ıııe	Ala
															Cor	uic
	545		ALA	ASP	тте	550		гуу	гус	GIU	555		Ald	ASI	ser	His 560
			Aer	Thr	. Aen			Lan	T.376	T.376			Aen	Aer	Aen	Glu
168	v 411	O £ U	<u>.</u>	* 111L	565		200	. 100	. Lyc	· 570		. 1100	1.011		575	
	Glu	Ser	Asp	Thr			Asn	Ser	Thr			Ser	Ile	Aro		His
172			-	580					585					590		
175	Ile	Asp	Ser	Asp	Trp	Lys	Leu	Glu	Asp	Ser	Asn	Asp	Gly	Asp	Arg	Glu
176			595					600	1				605			
179	Asp	Asn	Asp	Asp	Ile	Ser	Arg	Phe	Glu	Lys	Ser	Asp	Ile	Leu	Asn	Asp

Input Set : A:\sequencelisting_09-964,858.txt
Output Set: N:\CRF4\09152003\I964858A.raw

									4.5							•
180		610					615					620				
183	Val	Ser	Gln	Thr	Ser	Asp	Ile	Ile	Gly	Asp	Lys	Tyr	Gly	Asn	Ser	Ser
184	625					630					635					640
187	Ser	Glu	Ile	Thr	Thr	Lys	Thr	Leu	Ala	Pro	Pro	Arg	Ser	Asp	Asn	Asn
188					645					650					655	
191	Asp	·Lys	Glu	Asn	Ser	Lys	Ser	Leu	Glu	Asp	Pro	Ala	Asn	Asn	Glu	Ser
192				660					665					670		
195	Leu	Gln	Gln	Gln	Leu	Glu	Val	Pro	His	Thr	Lys	Glu	Asp	Asp	Ser	Ile
196			675					680					685			
199	Leu	Ala	Asn	·Ser	Ser	Asn	Ile	Ala	Pro	Pro	Glu	Glu	Leu	Thr	Leu	Pro
200		690					695					700				
203	Val	Val	Glu	Ala	Asn	Asp	Tyr	Ser	Ser	Phe	Asn	Asp	Val	Thr	Lys	Thr
	705					710					715					720
207	Phe	Asp	Ala	Tyr	Ser	Ser	Phe	Glu	Glu	Ser	Leu	Ser	Arg	Glu	His	Glu
208					725					730					735	
	Thr	Asp	Ser	_	Pro	Ile	Asn	Phe		Ser	Ile	Trp	His	_	Gln	Glu
212				740		_	_		745					750		
	Lys	Gln	_	Lys	His	Gln	Ile		Lys	Val	Pro	Thr	_	Gln	Ile	Ile
216		_	755	~ 1	~ 1	_	_	760	~ 3	~ 1	~1	_	765			_
	Ala		Tyr	GIn	GIn	Tyr	Lys	Asn	GIu	GIn	GLu		Arg	Val	Thr	Ser
220	70	770	77.7	.	T1 .	Б	775	7.1.	T1 .	61 .	D1	780	.	D1 .		61
		ьys	vai	ьуѕ	тте		Asn	Ата	тте	GIN		гуѕ	гÀг	Pne	ьys	
224		7 cn	W-1	Mot	Cor	790	Arg	17-1	17-1	Cor	795	7.00	Mot	7.00	7 00	800
228	vaı	ASII	vaı	Mec	805	Arg	Arg	vai	vai	810	FIO	изр	Met	АЗР	815	ьeu
	Asn	Val	Ser	Gln		T.e.11	Pro	Glu	T.e.13		Glu	Asn	Ser	Glv		T.vs
232	11011	vul	DCI	820	1110	пси	110	014	825	DCI	Olu	7150	DCI	830	1110	БУЗ
	Asp	Leu	Asn		Ala	Asn	Tyr	Ser		Asn	Thr	Asn	Ara		Ara	Ser
236			835				-1-	840					845		9	
239	Phe	Thr	Pro	Leu	Ser	Thr	Lys	Asn	Val	Leu	Ser	Asn	Ile	Asp	Asn	Asp
240°		850					855					860		-		-
243	Pro	Asn	Val	Val	Glu	Pro	Pro	Glu	Pro	Lys	Ser	Tyr	Ala	Glu	Ile	Arg
244	865					870				_	875	_				880
247	Asn	Ala	Arg	Arg	Leu	Ser	Ala	Asn	Lys	Ala	Ala	Pro	Asn	Gln	Ala	Pro
248					885					890					895	
	Pro	Leu	Pro	Pro	Gln	Arg	Gln	Pro	Ser	Ser	Thr	Arg	Ser	·Asn	Ser	Asn
252	•			900					905					910		
	Lys	Arg		Ser	Arg	Phe	Arg		Pro	Thr	Phe			Arg	Arg	Thr
256			915					920		_			925			
	Ser		Ala	Leu	Ala	Pro	Cys	Asp	Met	Tyr	Asn	-	Ile	Phe	Asp	Asp
260		930			_		935					940				
		Gly	Ala	GLY	Ser	-	Pro	Thr	He	Lys		GLu	GLY	Met	Lys	
264		_	~		•	950		_			955	~ 1		~		960
	ьeu	Pro	Ser	Met		гàг	Asp	Asp	vaı	-	Arg	TTE	Leu	Asn		Lys
268	T	C1	1701	m la sa	965	7	C1	m	Tla	970	7.1.	T	т а	W-1	975	C1 -
272	пÀг	ату	val	980	GTII	Asp	Glu	T AT.	985	ASII	ATd	туѕ	ьeu	990	Asp	GTU
	Lve	Pro	Luc		Aen	Ser	Tla	V=1		· Aer	Dro	. G1,	ı Aer		~~ ጥ•	r Glu
276	шуз	110	995	шуз	AJII	JEI	TTC	1000		. ASE	, ET(, 916	100		. y . 1	, L GIU
2,0								1000	,				100	, ,		

Input Set : A:\sequencelisting_09-964,858.txt
Output Set: N:\CRF4\09152003\I964858A.raw

								,							
			Gln	Gln	Thr	Ala	Ser	Ile	His	Asn	Ala		Ile	Asp	Ser
280		1010					1015					1020			
283	Ser	Ile	Tyr	Gly	Arg	Pro	Asp	Ser	Ile	Ser	Thr		Met	Leu	Pro
284		1025					1030					1035			
287	Tyr	Leu	Ser	Asp	Glu	Leu	Lys	Lys	Pro	Pro	Thr	Ala	Leu	Leu	Ser
288		1040					1045					1050		,	
291	Ala	Asp	Arq	Leu	Phe	Met	Glu	Gln	Glu	Val	His	Pro	Leu	Arg	Ser
292		1055	-				1060					1065		_	
295	Asn	Ser	Val	Leu	Val	His	Pro	Glv	Ala	Glv	Ala	Ala	Thr	Asn	Ser
296		1070					1075	_		1		1080			
	Ser		Leu	Pro	Glu	Pro	Asp	Phe	Glu	Leu	Ile	Asn	Ser	Pro	Ala
300		1085					1090					1095			
	Ara		Val	Ser	Asn	Asn	Ser		Asn	Val	Ala	Ile	Ser	Gly	Asn
304	*****	1100		001			1105	110 p	11011		11110	1110		011	
	Ala		Thr	Tle	Ser	Phe	Asn	Gln	T.e.11	Asp	Met	Asn	Phe	Asp	Asn
308	1114	1115	1111	110	DCI	1110	1120	0111	БСС	1100	1100	1125	1110	пор	1100
	Gln		Thr	Tla	Glv	Gln	Lys	T۱۵	Gln	Glu	Gln		Δla	Ser	Lvs
312	OIII	1130	1111	110	СГУ	CIII	1135	110	OIII	Olu	OIII	1140	232.0	DCI	шу
	Sar		Aen	Thr	V = 1	Ara	Gly	Aen	Aen	Acn	Gly		Δla	Sar	Δla
316	261	1145	ASII	1111	vai	Arg	1150	лэр	АЗР	лэр	оту	1155	итα	DCI	нια
	Dro	Glu	Thr	Dro	71 20 00	Th.∽	Pro	Thr	Tvc	Tvc	Glu		Tlo	Ser	Sor
320	FIO	1160	1111	FIO	Arg	1111	1165	1111	гуз	гуз	GIU	1170	116	261	Ser
	Luc		71.	Tvc	T 011	Sor	Ser	Λla	cor	Dro	Λrα		Sor	Dro	Tlo
324	пур	1175	на	гуз	ьeu	Ser	1180	Ala	ser	FIO	Arg	1185	261	110	116
	Tvc		C1,,	Cor	Dro	Wa 1	Arg	Va I	т1.	Tvc	Tvc		C117	Sor	Tlo
328	гуу	1190	СТУ	Ser	PIO	val	1195	vaı	116	гу	гу	1200	σтў	Ser	116
	ת דת		Tlo	Clu	Dro	T10	Pro	Tvc	7.1.	Thr	Uic	Lys	Pro	Lve	Twe
332	ΑΙα	1205	116	Giu	110	116	1210	цуз	Αια	1111	1113	1215	110	цуз	цуз
	Cor		Cln	C3 11	Λan	Clu	Ile	Sar	λan	ui.c	Tvc	Val	Λrα	7 cn	C1 17
336	261	1220	GTII	GTA	N311	GIU	1225	Det	ASII	1113	пуз	1230	ALG	АЗР	ОТУ
	C1.,		Sor	Dro	Sor	Sor	Gly	Sar	Clu	шіс	Gln		Шic	Asn	Dro
340	дту	1235	Set	FIO	Ser	Ser	1240	Ser	GIU	1113	GIII	1245	1113	ASII	FIO
	Ser		₹7 a 1	Cox	17-3	Dro	Ser	Cln	Тиг	Прх	7 an	Ala	ሞኮኦ	Ser	Thr
344	ser	1250	val	Ser	vai	FIG	1255	GIII	туг	1111	ASP	1260	1111	Ser	1111
	₩. 1		7 ~~	C1	7 ~ ~	T		17.0 1	C15	IIi a	T		7 ~~	C1.,	T
347	var	Pro	Asp	GIU	ASI	ьуѕ	Asp	vaı	GIII	HIS	гаг		Arg	GIU	гуу
	01	1265	C 1	T			1270	70	17.1 .	11.1	11.1 -	1275	77.J _	TT 2 =	T
	GIn	_	Gin	ьys	HIS	HlS	His	Arg	HIS	HIS	HIS		His	HIS	ьys
352	~ 1	1280	m)		- 1		1285	** 7	., 1		.	1290	- 1.	D	70
	GIn		Thr	Asp	тте	Pro	Gly	Val	vaı	Asp	Asp		тте	Pro	Asp
356		1295	_			_	1300	_	_			1305			~ .
	Val	_	Leu	GIn	Glu	Arg	Gly	Lys	Leu	Phe	Phe		Val	Leu	GTA
360		1310	_		_	_	1315	_		_	— 1	1320	_	- 1	_
	lle	Lys	Asn	TTe	Asn	Leu	Pro	Asp	ile	Asn	Thr		ьуs	GLY	Arg
364		1325					1330					1335	_		
	Phe		Leu	Thr	Leu	Asp	Asn	Gly	Val	His	Cys		Thr	Thr	Pro
368		1340					1345			_		1350	_		
	Glu	_	Asn	Met	Asp	Asp	His	Asn	Val	Ala	Ile	_	Lys	Glu	Phe
372		1355					1360					1365			
375	Glu	Leu	Thr	Val	Ala	Asp	Ser	Leu	Glu	Phe	Ile	Leu	Thr	Leu	Lys

Input Set : A:\sequenceListing_09-964,858.txt
Output Set: N:\CRF4\09152003\I964858A.raw

376		1370					1375					1380					
379	Ala	Ser	Tyr	Glu	Lys	Pro	Arq	Gly	Thr	Leu	Val	Glu	Val	Thr	Glu		
380		1385			. 1		1390	-				1395					
383	Lys	Lys	Val	Val	Lys	Ser	Arg	Asn	Arq	Leu	Ser	Arg	Leu	Phe	Gly		
384	-	1400			1		1405		,			1410			-		
	Ser	Lvs	Asp	Ile	Ile	Thr	Thr	Thr	Lvs	Phe	Val	Pro	Thr	Glu	Val		
388		1415					1420		-1-			1425					
	Lvs			Trp	Ala	Asn	Lvs	Phe.	Ala	Pro	Asp	Gly	Ser	Phe	Ala		
392	_	1430					1435				-	1440					
						Leu		Gln	Phe	Glu	Asp	Gln	Ile	Thr	Gly		
396		1445	_		-		1450				-	1455			-		
	Lys			Gln	Phe	Asp	Leu	Asn	Cys	Phe	Asn	Glu	Trp	Glu	Thr		
400	-	1460				-	1465		-			1470	•				
403	Met	Ser	Asn	Gly	Asn	Gln		Met	Lys	Arg	Gly	Lys	Pro	Tyr	Lys		
404		1475					1480		-		-	1485		-	-		
407	Ile	Ala	Gln	Leu	Glu	Val	Lys	Met	Leu	Tyr	Val	Pro	Arq	Ser	Asp		
408		1490					$1\overline{4}95$			•	•	1500			•		
411	Pro	Arg	Glu	Ile	Leu	Pro	Thr	Ser	Ile	Arg	Ser	Ala	Tyr	Glu	Ser		
412		1505					1510			_		1515	-				
415	Ile	Asn	Glu	Leu	Asn	Asn	Glu	Gln	Asn	Asn	Tyr	Phe	Glu	Gly	Tyr		
416		1520					1525					1530					
419	Leu	His	Gln	Glu	Gly	Gly	Asp	Cys	Pro	Ile	Phe	Lys	Lys	Arg	Phe		
420		1535					1540					1545					
423	Phe	Lys	Leu	Met	Gly	Thr	Ser	Leu	Leu	Ala	His	Ser	Glu	Ile	Ser		
424		1550					1555					1560					
427	His	Lys	Thr	Arg	Ala	Lys	Ile	Asn	Leu	Ser	Lys	Val	Val	Asp	Leu		
428		1565					1570					1575					
431	Ile	Tyr	Val	Asp	Lys	Glu	Asn	Ile	Asp	Arg	Ser	Asn	His	Arg	Asn		
432		1580					1585					1590				,	
	Phe		_	Val	Leu	Leu		Asp	His	Ala	Phe	Lys	Ile	Lys	Phe		
436		1595					1600					1605					
•	Ala		_	Glu	Leu	Ile	Asp	Phe	Cys	Ala	Pro	Asn	Lys	His	Glu		
440		1610		_			1615	_				1620	_	_	_		
	Met		Ile	Trp	Ile	Gln		Leu	Gln	Glu	Ile	Ile	Tyr	Arg	Asn		
444	_	1625	_	_		_	1630		_	_		1635		~ 7	~1		
	Arg		Arg	Arg	GIn	Pro	_	Val	Asn			Leu	GIn	GIn	GIn		
448	6 1	1640	0.3	61	~ 1	~ 1	1645	~	•			1650					
	GIn		GIn	GIn	GIn	GIn	Gln	Ser	Ser	GIn	GIN						
452	-010	1655		N10	^		1660										
)> SEQ															
		> LEN			94									`			
		PYE				ء داد	albica										
						.aa a	ILDICa	ins									
		> SEQ								+			+ +	2++	****		60
															gaaactt	1	60 120
															ccaagt ctcggca		180
															geegagt		240
															agggaaa		300
403	ccag	jatuud	ia al	Luda	igul	, cyc	icacci	.ac a	ıcıal	juyac	ic ac	igatio	iaya	yaac	iyyyaaa		,,,,

VERIFICATION SUMMARY

DATE: 09/15/2003

PATENT APPLICATION: US/09/964,858A

TIME: 15:33:46

Input Set : A:\sequenceListing_09-964,858.txt
Output Set: N:\CRF4\09152003\I964858A.raw